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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,126	03/10/2004	Christian Cottevieille	Q80242	2476

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EXAMINER	
TRAN, HOANG Q	

ART UNIT	PAPER NUMBER
2874	

MAIL DATE	DELIVERY MODE
12/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/796,126	COTTEVIEILLE ET AL.	
	Examiner	Art Unit	
	Hoang Tran	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 11-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 11-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable by the US Patent to Casiraghi (6,278825B1) in view of Anderson (6,195,487).

In terms of Claim 1, Casiraghi teaches an optical fiber cable (Figure 1), at least one central strength member (Column 3 lines 25-30), at least one optical fiber (Column 3 lines 24), a metallic conductor surrounding said fiber (Column 3 lines 40-45), surrounding said conductor (Column 3 lines 40-45), a layer of insulative composition comprising mainly a mixture of polymers comprising at least one high density first polymer and low density second polymer which has a lower viscosity than said first polymer (Column 4l line 25-45). Casiraghi does not teach further comprising an armor layer disposed on the outside of said insulative layer. Anderson does teach an armor layer is disposed on the outside of an insulate layer (Col 2 [30-40]). A motivation to make such a modification would be to enhance the mechanical protection of the armor from environmental conditions due to exposure. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of

Anderson to the fiber cable Casiraghi in order to make enhance the mechanical protection of the fiber.

As for Claim 3, Casiraghi teaches a cable according to Claim 1, wherein said first polymer is a high-density polyethylene and said second polymer is a low-density polyethylene (Column 4 lines 20-25 and Table 1).

As for Claim 6, Casiraghi teaches a cable according to Claim 1, wherein said insulative composition further contains additives (Column 5 lines 30-35).

Claims 2, 4, 5 , 14, 15, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Casiraghi in view of Anderson further in view of the WIPO Patent Application Publication to Rogestedt (WO9703124A1).

With respect to Claim 2, Casiraghi teaches the cable according to Claim 1. Casiraghi does not teach an optical cable wherein said first polymer has a melt flow rate less than 6g/10 min. Rogestedt teaches a cable wherein the first polymer has a melt flow rate less than 6g/10 min (Page 8 line1) to find the optimal density configuration of the polymer mixture. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Rogestedt's first polymer melt flow rate attribute to Casiraghi optical cable in order to manipulate different density of the polymer mixture to obtain better process ability.

With respect to Claim 4, Casiraghi teaches the cable according to Claim 1. Casiraghi does not teach an optical cable wherein the proportion of said second polymer is at most 20% by weight of said polymer mixture. Rogestedt teaches a cable wherein the proportion of said the polymers is at most 20% by weight of said polymer mixture (Page 4 line 10-15) to produce a cable with improved properties. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Rogestedt's polymer weight limitations of 20% to Casiraghi optical cable in order to produce a product with better properties such as ESCR, shrinkage, and mechanical strength.

With respect to Claim 5 ,14, 15, 16, Casiraghi teaches the cable according to Claim 1. Casiraghi does not teach an optical cable wherein the proportion of said second polymer is from 5%-20% by weight of said polymer mixture. Rogestedt teaches a cable the proportion of said the polymers is at most 20% by weight of said polymer mixture (Page 4 line 10-15) preferably 1-10% to produce a cable with improved properties. It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teaching of Rogestedt's polymer weight limitations of 5%-20% of the polymer weight mixture to Casiraghi optical cable in order to produce a product with better properties such as ESCR, shrinkage, and mechanical strength.

Claim 11 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over the US Patent to Casiraghi in view Anderson further in view of the US Patent Application Publication to Tuminaro (2002/0090183).

Regarding Claim 11, Casiraghi teaches the cable of Claim 1. Casiraghi does not teach the cable of Claim 1 further comprising an armor layer disposed on the outside of said insulate layer. Tuminaro does teach an application of a fiber cable further comprising of an armor layer disposed on the outside of said insulate layer and further an outer jacket for external protection (Paragraph [0036]) in order to enhance the mechanical protection of the cable. A motivation for such an application would be to increase the durability of the cable by enhancing the protective layer of the cable. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Tuminaro to the cable of Casiraghi in order to enhance the protective layer of the cable.

Claim 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the US Patent to Casiraghi in view of Anderson furthers in view of the US Patent to Petisce (5,539,849).

Regarding Claim 12, Casiraghi teaches the cable of Claim 1. Casiraghi does not teach the cable of Claim 1, wherein said metallic conductor is immediately adjacent said optical fiber and said insulative layer is immediately adjacent said metallic conductor. Petisce does teach a fiber cable comprising of the configuration stated above (Fig 1) in order to make the cable ideal for under sea deployment. A motivation for such a configuration would be to make the cable idea for deployment in sea or ocean like conditions. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Petisce to the cable of Casiraghi in order to make a cable capable of under sea deployment.

As for Claim 13, Casiraghi teaches an annular metallic conductor (Fig 1).

Response to Arguments

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection. Applicant has added newly amend limitations in which have been consider. New grounds of rejection were made in view of Anderson.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Tran whose telephone number is 571-272-5049. The examiner can normally be reached on 9:00AM - 5:00 PM.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HT

Hoang Tran

AU 2874

December 21, 2007

/Kevin S. Wood/
Kevin S. Wood
Primary Examiner
Art Unit 2874